UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,623	10/02/2003	Naoki Nishimura	B588-035	9321

26272 7590 06/25/2008

COWAN LIEBOWITZ & LATMAN P.C.
JOHN J TORRENTE
1133 AVE OF THE AMERICAS
NEW YORK, NY 10036

EXAMINER	
GEBRIEL, SELAM T	

ART UNIT	PAPER NUMBER
2622	

MAIL DATE	DELIVERY MODE
06/25/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/677,623	NISHIMURA ET AL.	
	Examiner	Art Unit	
	SELAM T. GEBRIEL	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 5 is objected to because of the following informalities: Claim 5 recites "an image obtaining apparatus, comprising a plurality of devices described in claim 1, wherein said plurality of devices and wireless communication described in claim 1 construct a network of said plural devices" the Examiner could not understand to what the applicant refers when say "plurality of devices described in claim 1" Since there is only one device disclosed in claim 1.

Appropriate correction or clarification is required.

2. Claim 6 is objected to because of the following informalities: "Claim 6 can not depend on itself. For prosecution purpose the Examiner considers claim 6 depending on claim 5.

Appropriate correction or clarification is required.

3. Claim 7 is objected to because of the following informalities: Claim 5 recites "a control method of controlling a plurality of devices described in claim 1, comprising the steps of: Performing wireless communication to control transmission of imaging information from said plurality of devices; and Receiving said imaging information by said wireless communication" the examiner could not understand to what the applicant

refers when say "plurality of devices described in claim 1" Since there is only one device disclosed in claim 1.

Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11 - 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 11 – 15 recite the limitation "said imaging device". There is insufficient antecedent basis for this limitation in the claims. The claims are intepreted as best understood by the Examiner.

Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 8, 9, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tariki (US 2002/0047910 A1)

8. Regarding claim 8, Tariki disclose an image obtaining apparatus (Figure 4), comprising:

A plurality of imaging devices (Figure 4, Element 420 and 421) which provide a wireless communication function (Figure 4, Element 403, 407 and 412) and a single imaging function (See Figure 5, the two images 503 and 502 makes one single imaging function, Page 5, Section 0075),

wherein said plurality of imaging devices provide, as a whole, one or more high-level imaging functions by co-operative work using said wireless communication function (See Figure 5, the two images 503 and 502 makes one single imaging function, Page 5, Section 0075).

9. Regarding claim 9, Tariki disclose the apparatus according to claim 8, further comprising:

A base section (Figure 4, Element 422) arranged to perform said wireless communication with said plurality of imaging devices, to control transmission of imaging information from said plurality of devices, and to receive said imaging information (See Figure 4 and Page 4 and 5, Section 0065 - 0068).

Regarding claim 10, Tariki disclose the apparatus according to claim 8,

Wherein said imaging device has a sensing function, and wherein a network of said plurality of imaging devices is constructed utilizing said wireless communication, to

provide information to be managed by an external device (See Figure 4, Element 420, 421 and 422, Page 4, Section 0062 - 0065).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 11 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tariki (US 2002/0047910 A1) in view of Ying (US 2005/0219144 A1).

12. Regarding claim 11, Tariki discloses the apparatus according to claim 8 having a lens (Figure 4) and an image sensor (Figure 4).

Tariki does not teach the apparatus according to claim 8, wherein said imaging device having a spherical lens.

However Ying disclose wherein said imaging device (Figure 1, Element 7a) has a spherical lens (Figure 4B, Element 31) and an optical sensor (CCD, Page 3, Section 0042, "The lens 70 is steadily attached in a fixed position relative to the image capturing means of the camera, e.g. a CCD")

Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the imaging device lens of Tariki with the spherical

lens of Ying. The motivation to do so is to correct spherical aberration and to provide the imaging device with a lens having a satisfactory imaging characteristic in both axial and non axial positions, capable of intercepting harmful light such as flare and capable of achieving a wide imaging angle and a desired resolving power.

13. Regarding claims 12 – 14, the combination of Tariki and Ying discloses the plurality of imaging devices having lens and aperture but fails to clearly talk about the refractive index of the lens and the aperture value being different or fixed. Official Notice is hereby taken that it is well known in the art that the refractive index of the lens and the aperture value different are different by imaging device. It would have been obvious to one ordinary skilled in the art at the time the invention was made to use imaging devices having lens/aperture that has a different refractive index. The motivation to do so is that in order to correct spherical aberration of the spherical lens and to provide spherical lens having a satisfactory imaging characteristic in both axial and non axial positions, capable of intercepting harmful light such as flare and capable of achieving a wide imaging angle and a desired resolving power, all these are achieved by specifying the refractive index of the lens and the aperture value for the different imaging devices according to the application the imaging device is needed for.

14. Regarding claim 15, the limitation for the apparatus according to claims 8 and 11 are taught above.

The combination of Tariki and Ying discloses the plurality of imaging devices but fails to clearly teach the plurality of imaging devices having a single color filter. Official Notice hereby is taken that it is well known in the art that the plurality of imaging devices having a single color filter. It would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the plurality of imaging devices to incorporate a color filter. The motivation to do so is that for filtering incident light for respective photoelectric conversion elements arranged in a two-dimensional array of an imager sensor.

15. Regarding claims 16 and 17, limitation for the apparatus according to claim 8 are taught above.

The combination of Tariki and Ying disclose plurality of imaging devices but failed to clearly teach the plurality of imaging devices having polarizing filter. Official notice hereby is taken that it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the plurality of imaging devices to incorporate polarizing filter, Linear Polarizing or Circular Polarizing filters. The motivation to do so is that in an imaging device light rays which are reflected by any surface become polarized and polarizing filters are used to select which light rays enter the lens of an imaging device. Linear Polarizing and Circular Polarizing filters have the same effect. They allow the user of the imaging device to remove unwanted reflections from non-metallic surfaces such as water, glass etc. They also enable colors to become

more saturated and appear clearer, with better contrast. This effect is often used to increase the contrast and saturation in blue skies and white clouds.

16. Claims 1 – 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (US 6,052,509) in view of Ying (US 2005/0219144 A1).

17. Regarding claim 1, Abe discloses a wireless imaging device (Figure 1) comprising:

An imaging section (Figure 6, Element 112) arranged to provide a function of imaging a subject; and

A communication section (Figure 1, Element 20, 24, 22 and 42, 44, 68) arranged to provide a wireless communication function,

Wherein said imaging section comprises an optical lens (Figure 6, Element 180b), an aperture (Figure 4, Element 184a, Iris) to limit incident light on said optical lens, an optical sensor (Figure 4, Element 188) to convert the incident light passed through said aperture into an electric signal (Col 8, Line 64 – 67 to Col 9, Line 1 – 18), and

Abe teaches an antenna 22 connected with camera control circuit, camera signal processing circuit, image pickup portion 12 which comprises a lens 180b, an iris or aperture 184a to wireless-transmit said electronic signal converted into a radio signal to said communication section (Figure 1, Element 20, 24, 22 and 42, 44, 68) but does not clearly teach the antenna integrally provided with the aperture.

However Ying teach an antenna integrally provided with lens that has an aperture or opening (See Figure 7A, 7B and 7C), to wireless-transmit said electronic signal converted into a radio signal to said communication section or mobile terminal (Page 3, Section 0050).

Therefore it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the wireless imaging section or image pickup of Abe with the teaching of Ying lens aperture that can wirelessly transmit signal to a communication device or mobile terminal. The motivation to integrally provide an antenna with the lens aperture is to minimize space consumption, decrease hand interference and minimize antenna losses (Abstract).

18. Regarding claim 2, Abe in view of Ying further discloses the device according to claim 1, wherein said communication section generates a high frequency signal based on said electric signal, and supplies the generated high frequency signal to said antenna (Abe, See Figure 1 and 2, The communication section 20, 24, and 22 of the camera portion 10 generates a wireless signal at S14 and supplies the generated wireless signal to communication section 42, 44 and 68 of the body portion 40).

19. Regarding claim 3, Abe in view of Ying the device according to claim 1, wherein the entire surface of said aperture is formed as said antenna (Ying, See Figure 7A, 7B and 7C the lens aperture has antenna inside).

20. Regarding claim 4, Abe in view of Ying further disclose the device according to claim 1,

Wherein said imaging section is a spherical member (Ying, See Figure 6A, Page 3, Section 0042, The lens 70 is steadily attached in a fixed position relative to the image capturing means of the camera, e.g. a CCD) and has said aperture (Ying, See Figure 7A, 7B, and 7C) and said antenna (Ying, See Figure 7A, 7B, and 7C) in a cross section passing through the center of the spherical member, and said optical sensor (Ying, CCD, Page 3, Section 0042, "The lens 70 is steadily attached in a fixed position relative to the image capturing means of the camera, e.g. a CCD") in a part of a spherical surface of the spherical member (Ying, See Figure 7A, 7B, and 7C).

21. Claims 5 – 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abe (US 6,052,509) in view of Ying (US 2005/0219144 A1) in further view of Tariki (US 2002/0047910 A2).

22. Regarding claim 5, Abe in view of Ying discloses a wireless imaging device and a wireless communication section as stated above.

Abe in view of Ying fails to clearly disclose an image obtaining apparatus, comprising a plurality of devices described in claim 1, wherein said plurality of devices and wireless communication described in claim 1 construct a network of said plural devices.

Tariki disclose an image obtaining apparatus (Figure 4), comprising a plurality of devices (Figure 4, Element 420 and 421) described in claim 1, wherein said plurality of devices (Figure 4, Element 420 and 421) and wireless communication (Figure 4,

Element 412) described in claim 1 construct a network of said plural devices (See Figure 4, Element 420, 421 and 422, Page 4, Section 0062 - 0065).

Therefore it would have been obvious to one ordinary skilled in the art at the invention was made to connect plurality of devices taught in the combination Abe and Ying with the same way as plurality of devices connected in Tariki. The motivation of connecting plurality of devices and forming an imaging apparatus is that when connecting plurality of devices together using wireless communication method the user of the imaging apparatus has the option of for example capturing two different images from two remotely located cameras and displaying or editing the captured images in one displaying or editing device giving the user the freedom accessing the images from wherever the user decided to install the displaying or editing device .

23. Regarding claim 6, Abe in view of Ying in further view of Tariki further disclose the apparatus according to claim 6 [5], further comprising:

A base section (Figure 4, Element 422) arranged to perform said wireless communication with said plurality of devices, to control transmission of imaging information from said plurality of devices, and to receive said imaging information (See Figure 4 and Page 4 and 5, Section 0065 - 0068).

24. Regarding claim 7, claim 7 is rejected based on claims 5 and 6, therefore please see the rejection above to see how the limitation are met.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SELAM T. GEBRIEL whose telephone number is (571)270-1652. The examiner can normally be reached on Monday-Thursday 7.30am-5.00pm.If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu NgocYen can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Selam T Gebriel/
Examiner, Art Unit 2622
June 19 2008

/Ngoc-Yen T. VU/
Supervisory Patent Examiner, Art Unit 2622